

**REMARKS**

Claims 2-6 are pending in the application. By this amendment, Applicants cancel claim 1, amend claims 2-4, and adds new claims 5 and 6. A request for a two-month extension is enclosed herewith. Reconsideration and allowance of all pending claims are requested in view of the remarks below.

In the claims, Applicants recast former dependent claims 2-4 as independent claims including the limitations of previously pending claim 1. During these amendments, Applicants removed the word type, as suggested by the Examiner.

Applicants thank the Examiner for indicating that claim 2 recites patentable subject matter. Applicants amend claim 2 to place the claim in condition for allowance.

Furthermore, Applicants also amend claim 3 to specify that a flow direction of an exhaust gas in a humidifier is *reversed* as a result of switching of a gas passage by a flow path switching mechanism. Amended claim 4 recites that a *cleansing mechanism* of a fuel cell humidifying system is provided for preventing clogging of a water permeable membrane in the humidifier.

In addition, Applicants add new claim 5, which recites that the flow path switching mechanism allows a dry gas to flow to an exhaust gas passage in the humidifier when the outside air temperature is equal to 0° C or lower. New claim 6 recites that the flow path switching mechanism allows the dry gas to flow to the exhaust gas passage in the humidifier when pressure at an inlet of the water permeable membrane exceeds a preset value.

**Claim Rejections – 35 USC § 102**

The Examiner rejected claims 1 and 3 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,106,964 of Voss et al.

The Voss et al. reference describes a Combined Heat and Humidity Exchanger (CHHE) having a gas passage which bends 180 degrees. The Voss et al. reference does not disclose that the flow direction of the gas in the humidifier is *reversed* (changed by a 180 degrees) by switching the gas passage. Specifically , in the Voss exchanger, the flow direction of the gas is constant and is not reversed or changed, especially by a switching mechanism.

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the outstanding rejection.

### **Claim Rejections – 35 USC § 103**

The Examiner rejects claim 4 under 35 U.S.C. §103(a) as being obvious over U.S. Patent No. 6,106,964 of Voss et al in view of U.S. Patent No. 5,668.535 of Hendrix et al.

The Hendrix et al. reference describes a filter condition sensor and an indicator for detecting whether a humidifier filter is clogged. The Hendrix et al. reference does not teach or suggest a sensor or system for *preventing clogging* of a water permeable membrane (which is not a filter) of a humidifier. In addition, the Hendrix et al. reference merely detects the clogging of the filter. There is no disclosure of structure for *preventing* clogging thereof.

### **New Claims**

None of the cited references teach or suggest the limitations of claims 5 and 6. Specifically, claim 5 recites that the flow path switching mechanism allows a dry gas to flow to an exhaust gas passage in the humidifier when the outside air temperature is equal to 0° C or lower. This claimed feature is neither taught or suggested by any of the cited references.

New claim 6 recites that the flow path switching mechanism allows the dry gas to flow to the exhaust gas passage in the humidifier when pressure at an inlet of the water

permeable membrane exceeds a preset value. Likewise, this claimed feature is neither taught or suggested by any of the cited references.

## CONCLUSION

In view of the remarks set forth above, it is respectfully submitted that this application is in condition for allowance. Accordingly, allowance is requested. If there are any remaining issues or the Examiner believes that a telephone conversation with the Applicants' attorney would be helpful in expediting prosecution of this application, the Examiner is invited to call the undersigned at (617) 227-7400.

Respectfully submitted,

LAHIVE & COCKFIELD, LLP

By: Anthony Laurentano  
Anthony A. Laurentano  
Registration No. 38,220  
Attorney for Applicants

28 State Street  
Boston, MA 02109  
(617) 227-7400  
(617) 742-4214  
Dated: April 18, 2003